

CLAIMS

I claim:

- 1 1. A heat insulated wall structure for positioning between an interior heat controlled  
 2 space of a building structure and an outside environment adjacent the building structure,  
 3 comprising:  
 4 a series of spaced parallel support members,  
 5 an exterior wall applied to said spaced parallel support members and positioned  
 6 between said spaced parallel support members and the outside environment,  
 7 a layer of radiant heat insulation placed between adjacent ones of said parallel  
 8 support members in overlying relationship with respect to said exterior wall and positioned  
 9 between said exterior wall and the interior heat controlled space,  
 10 said layer of radiant heat insulation comprising a pair of superposed support sheets  
 11 having formed there between an array of gas filled cells and a radiant heat reflective surface  
 12 positioned in said cells, forming a radiant heat reflective cell blanket,  
 13 whereby the radiant heat reflective surface is protected in said cell blanket from  
 14 accumulation of dust by the pair of superposed support sheets.
- 1 2. The heat insulated wall structure of claim 1, wherein said radiant heat reflective  
 2 surface is sheet metal foil positioned in said cells.

1 3. The heat insulated wall structure of claim 1, wherein said radiant heat reflective  
2 surface comprises at least one of said superposed support sheets bearing a heat reflective  
3 metalized surface.

1 4. The heat insulated wall structure of claim 1, wherein said radiant heat reflective  
2 surface comprises at least one of said superposed support sheets bearing opposed heat  
3 reflective metalized surfaces.

1 5. The heat insulated wall structure of claim 1, and further including an interior  
2 wall applied to said spaced parallel support members and positioned between said cell  
3 blanket and the temperature controlled space.

1 6. The heat insulated wall structure of claim 1, wherein said cells of said array of  
2 gas filled cells each have a perimeter seam formed in said pair of superposed support sheets  
3 that seal the cells between said support sheets, and said surfaces of radiant heat reflective  
4 material do not extend into said perimeter seam.

1 7. The heat insulated wall structure of claim 1, wherein said radiant heat reflective  
2 surfaces in said cells comprise a pair of superposed sheets of radiant heat reflective material,  
3 and means for maintaining said superposed sheets of radiant heat reflective material out of  
4 contact with each other.

1 8. The heat insulated wall structure of claim 1, wherein said gas filled cells are  
2 hermetically sealed.

1 9. A radiant heat insulation blanket for reflecting heat comprising:  
2 a pair of superposed support sheets of flexible material connected together with an  
3 array of gas filled cells formed therein,  
4 a radiant heat reflective surface positioned in said cells for reflecting radiant heat  
5 away from said blanket,  
6 so that the superposed support sheets protect the radiant heat reflective surface in  
7 said cells from accumulation of dust and from contact with other objects.

1 10. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective  
2 surface is formed of reflective metal foil.

1 11. The radiant heat insulation blanket of claim 9, wherein said pair of superposed  
2 support sheets is translucent and said radiant heat reflective surface is formed of metal foil.

1 12. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective  
2 surface comprises at least one of said superposed support sheets being heat reflective.

1 13. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective  
2 surface comprises at least one of said superposed support sheets being formed with its  
3 opposed surfaces heat reflective.

1 14. The radiant heat insulation blanket of claim 9, and further including a fiberglass heat  
2 insulation blanket applied to said radiant heat insulation blanket.

1 15. The radiant heat insulation blanket of claim 9, and further including a board applied  
2 to one of said support sheets.

1 16. The radiant heat insulation blanket of claim 9, wherein said cells are filled with a gas  
2 selected from a group consisting of: carbon dioxide, nitrogen, argon, air, and freon.

1 17. The radiant heat insulation blanket of claim 9, wherein said radiant heat reflective  
2 sheet is sized to extend less than the full breadth of the cells.

1 18. The radiant heat insulation blanket of claim 9, and further including resilient objects  
2 placed in said cells for urging apart said pair of superposed support sheets of each cell.

1 19. A radiant heat insulation blanket for reflecting heat comprising:  
2 a pair of superposed support sheets of flexible heat fusible material heat fused  
3 together in an array of gas filled cells,  
4 at least one of said support sheets including a heat reflective surface facing within  
5 said cells for reflecting radiant heat,  
6 so that the superposed support sheets protect the radiant heat reflective surface from  
7 accumulation of dust and from contact with other objects.

1 20. The radiant heat insulation blanket of claim 19, wherein said radiant heat reflective  
2 surface is formed of materials selected from the group consisting of: metalized polyester,  
3 metalized polyethylene, metalized polyvinyl chloride, and metalized polypropylene.

1 21. The radiant heat insulation blanket of claim 19, wherein said pair of superposed  
2 support sheets is translucent and said radiant heat reflective surface is formed of metal.

1 22. The radiant heat insulation blanket of claim 19, and further including a fiberglass  
2 heat insulation blanket applied to one of said support sheets.

1 23. The radiant heat insulation blanket of claim 19, and further including a board applied  
2 to one of said support sheets.

1 24. The radiant heat insulation blanket of claim 19, wherein said cells are filled  
2 with a gas selected from the group consisting of: air, nitrogen, carbon dioxide, argon and  
3 freon..

1 25. The radiant heat insulation blanket of claim 19, wherein said radiant heat reflective  
2 sheets are sized to extend less than the full breadth of the cells.

1 26. The radiant heat insulation blanket of claim 19, and further including resilient objects  
2 placed in said cells for urging said pair of superposed support sheets apart.

1 27. A method of insulating a wall structure comprising:  
2 forming a cell blanket with a pair of superposed support sheets defining an array of  
3 gas-filled cells and a reflective surface in each of said cells,  
4 placing the cell blanket in a wall structure,  
5 reflecting radiant heat with the reflective surfaces from within the cells of the cell  
6 blanket,  
7 protecting the reflective surfaces from the accumulation of dirt, dust, fibers and  
8 vapor, and  
9 maintaining a gap adjacent the reflective surfaces to avoid engagement of the  
10 reflective surfaces by other objects.

1 28. The method of claim 27, wherein the step of protecting the reflective surfaces  
2 comprises hermetically sealing the cells about the reflective surfaces.

1 29. The method of claim 27, wherein the step of maintaining a gap adjacent the  
2 reflective surfaces comprises maintaining a gap inside the cells adjacent the reflective  
3 surfaces.